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GEOGRAPHICAL RECORD.

AMERICA.

ASSOCIATION OF AMERICAN GEOGRAPHERS.—The Fifth Annual Meeting was held in Baltimore December 31, 1908-January 2, 1909, under the presidency of Mr. G. K. Gilbert. Professor Albrecht Penck gave a lecture before the Association at its opening session on Thursday evening, on "Man, Soil and Climate." Other features of the meeting were: the president's address by Mr. Gilbert, on the subject, "Earthquake Forecasts"; and a round-table conference on "Geography for Secondary Schools," conducted by Professor R. E. Dodge. The conference was held informally in connection with a smoker at the Johns Hopkins Club on Friday evening. About thirty papers were read by members, representing meteorology and various phases of physiographic, biological, human and educational geography. The important subject of cartography was also well represented. The officers for the ensuing year are: President, W. M. Davis; First Vice-President, L. A. Bauer; Second Vice-President, E. R. Johnson; Secretary, A. P. Brigham; Treasurer, N. M. Fenneman; Councillors, Cyrus C. Adams, R. S. Tarr and R. E. Dodge. The place of the next meeting will be fixed by the Council.

A. P. B.

THE BALTIMORE MEETING.—The Baltimore meeting of the American Association for the Advancement of Science was probably the largest gathering of scientific men that has ever been held. The attendance is believed to have been in excess of 2,500. Among the public lectures having geographical bearings may be mentioned the addresses by Prof. Penck of Berlin on "Man, Climate and Soil"; Mr. W. A. Bryan of Honolulu, on "A Visit to Mount Kilauea"; and Major Squier, U. S. A., on "Recent Progress in Aeronautics." The celebration of the Darwin Centennial was the most conspicuous event of the meeting.

The Vice-President for the coming year of Section E (Geology and Geography) of the American Association will be Dr. R. W. Brock, Director of the Canadian Geological Survey. The winter meeting next year will be held at Boston under the presidency of Dr. David Starr Jordan, President of Stanford University. It was recommended that the following meeting be held in Minneapolis. The Council of the British Association has invited the members of the Association to attend the Winnipeg meeting in August next.

RAILROADS IN ALASKA.—While the unfavourable financial conditions retarded railroad building in Alaska in 1908, considerable progress was made, especially along the Copper River. This line was extended last season from Cordova to Childs Glacier, 47 miles. Steamers will run in connection with the road from Abercrombie Rapids, so that this year the long overland journey from the coast to reach the Chitina copper belt will be avoided. As railroads in Alaska are of much public interest, the following statement of mileage in operation, compiled from the report of the Geological Survey on the mining industry in Alaska, is given here:

Seward Peninsula. : Seward Pen. R. R., Nome to Shelton, 80 miles; Paystreak to Branch S. P. Railroad, 6.5 miles; Council City and Solomon River R.R., Council to Penelope Creek, 32.5 miles; Wild Goose R.R., Council to Ophir Creek, 5 miles.

Fairbanks: Tanana Valley R.R., Fairbanks and Chena to Chatanika, 46 miles.

Kenai Peninsula: Alaska Central R.R., Seward to near head of Turnagain Arm.

Copper River: Copper River R.R., Cordova to Childs Glacier, 47 miles, up to September 17, and probably 11 miles have since been built.

White Pass: White Pass and Yukon R.R., Skagway to White Pass, 20.4 miles.

Yakutat Bay: Yakutat Southern R.R., Yakutat to Situk River, 9 miles.

ALLUVIAL DEPOSITS IN SOUTHERN CALIFORNIA.—The nature of the deposits in the great series of coalescing alluvial fans of which the Cucamonga and adjacent California quadrangles form widely-used examples, is described by Mendenhall.* Four hundred and fifty square miles of lowlands along the south base of the San Gabriel Mountains near Los Angeles are discussed and their economic importance may be judged from the fact, that in the 55,000 to 60,000 acres irrigated, \$1,000,000 is invested in wells and pumping plants. This acreage produces citrus and other fruits, and its value is at least \$20,000,000.

The valley of southern California, with its basins and mountain ranges, is explained as chiefly due to faulting, warping, and erosion, the movement along fault lines indicating that such deformation is still in progress. The San Gabriel Mountains are in a much more advanced stage of their latest erosion cycle than the adjacent San Bernardino range.

They present a labyrinth of canyons and ridges and peaks with no level area of any size. The ridges have narrow summits; the peaks are sharp; the streams are all evenly graded from source to mouth. In the San Bernardino Mountains, on the contrary, there are many wide upland valleys, forested and grassy glades and lakes or playas. * * * As the edge of these interior uplands is approached, the streams plunge into precipitous canyons, the slopes are as steep as earth and rock can stand, the roads and trails twist and turn and double to find devious and precarious way to the valleys below.

The alluvium which the streams from these mountains are carrying out to the basins is of two ages. The older gravels and clays, found only in benches and isolated knobs, are folded and sometimes highly inclined. They are usually of a dull-red color, due to the rather complete oxidation of their constituents. These older deposits, evidently formed under conditions similar to those in the present alluvial fans, have undergone diastrophic action. They complicate the conditions of ground-water circulation in the younger gravels.

The most recent gravels, carefully discriminated by Mendenhall as not glacial, slope gently from the mountains near which the slopes are steepest. Their surfaces form the bulk of the irrigated areas and through their porous layers the life-giving waters circulate, rising to the surface in artesian wells or by pumping. The annual rainfall in the plains is fifteen to twenty inches, increasing toward the mountains. The series of detailed maps showing the relationship of the areas of artesian water and of irrigated lands to the slopes of the alluvial fans and to the position of the "washes" is of decided interest.

L. M.

THE BISON RANGE IN THE FLATHEAD INDIAN RESERVATION, MONTANA.—This Range, for which Congress last year appropriated \$40,000, has been located north of Jocko River, near the towns of Ravalli and Jocko. Approximately, 12,800 acres are embraced in the tract, which will be fenced by the Engineering Department of the U. S. Forest Service. Only \$10,000 will be available for fencing the range and constructing the shelter sheds and other buildings. The remaining \$30,000 will be paid to the owners of the land, many of whom are Indians. Funds

*W. C. Mendenhall, *Ground Water and Irrigation Enterprises in the Foothill Belt, Southern California.* Water Supply Paper No. 219, U. S. Geological Survey, 1908.

for the purchase of bison are being raised through the agency of the American Bison Society, which was largely instrumental in securing the appropriation. This Society, of which William T. Hornaday, Director of the N. Y. Zoological Park, is President, was founded in 1904, and the Montana Bison Range is the direct result of its efforts. Details of the management of the herd will be worked out as soon as it is purchased, and construction work on fences and buildings will also be begun.

POMO INDIAN BASKETRY.—This is the title of a monograph (Vol. 7, No. 3 of Univ. of Cal., Pub. in American Archaeology and Ethnology), by S. A. Barrett. It has 144 pp., with many illustrations. Basketry reached a high state of perfection among the California Indians, who found many tough pliable fibers which might be woven or coiled into articles of use. Among no other California people was there so great a variety in basketry as among the Pomo, who occupied the greater part of Sonoma, Mendocino and Lake Counties. The general method pursued by Mr. Barrett in his studies was to question natives of the three dialectic groups of Pomo concerning the 840 patterns shown in the photographs of 321 Pomo baskets. The larger part of the volume is given to a description of these basketry patterns. These baskets in aboriginal times took the place of almost every sort of utensil for the gathering, transportation, storage and grinding of vegetable products, cooking and serving foods and for ceremonial and mortuary purposes.

AFRICA.

COMMERCIAL POSSIBILITIES IN WEST AFRICA.—The paper with this title, which Viscount Mountmorres recently read before the Institute of Commercial Research of Liverpool University, has been published by the Institute. It is chiefly a study, in some detail, of the commercial opportunities in British West Africa concerning which the author holds the most encouraging views. The substance of the paper is summed up in the concluding paragraph:

Given a large area of productive tropical land, within easy access of Europe, provided by nature with many river mouths and harbours, peopled by a sufficient population of skilful and intelligent workers, capable of easy development, and of being administered more cheaply than any other part of the British dominions, and we are fully justified in viewing, with confident anticipation of a brilliant success, the commercial future of British West Africa.

GEOLOGICAL SURVEY OF THE TRANSVAAL.—The *Report* for 1907 of the Director announced that it was intended in 1908 to begin the official survey of the Witwatersrand and describe all its geological formations which have attracted most attention. Among the geological results thus far are the arrangement and classification in the colony of the larger groups of formations, their correlations with the formations of neighbouring colonies, and some increase in our knowledge of the Transvaal coal-measures on the High Veld and of the former glaciation of the country. The *Report* gives a detailed account of the work accomplished in 1907 and is illustrated by maps in colours and by sections and photographs. (See new maps.)

ASIA.

PROF. CHAMBERLIN'S SPECIAL WORK IN CHINA.—Prof. T. C. Chamberlin, of the University of Chicago, after presiding at the Baltimore meeting of the American

Association, left with his son, Dr. Rollin Chamberlin, for San Francisco on the way to China. He will be joined there by Prof. Ernest D. Burton, also of Chicago University. These gentlemen have been sent to the Orient by the University to survey the educational situation in several Eastern countries with especial emphasis on China where the status of educational development will be closely studied. The general scope and purpose of their work is outlined in the following extract from the commission issued to them by President Judson of the University:

In the study of educational conditions and needs in China it is important that information be obtained from every source accessible. Your reports should indicate what seem to be the most important educational needs in that country, what work is actually under way, how far that work is well directed, and whether additional educational agencies and activities would contribute to the best interests of China in accordance with the highest ideals of modern civilization.

The general purpose of your work in oriental countries is to inquire into the possibilities of bringing about closer relations in educational matters between the east and the west with mutual advantage; in particular to determine whether educated men and those interested in education in China and in America can become of service to one another in the promotion of education in the world at large.

It is understood that prominent officials of the United States Government are interested in this investigation, that the co-operation of both educators and officials in China is assured and that a very large sum of money, from private sources, will be devoted to the promotion of education, on modern Western lines, in China if it is found that the empire is ready for such an innovation.

AUSTRALASIA.

NATIVE FAUNA OF AUSTRALIA.—In his annual address before the Linnean Society of New South Wales (*Proceedings*, No. 129), President Lucas says that the Australian native fauna is largely unique, and is remarkable for the comparatively small number of destructive vertebrates which, from man's point of view, may be looked upon as pests. The serious enemies to man are the insects, locusts, grasshoppers, caterpillars, beetles and the small fry that destroy the trees, shrubs and herbs. The marsupials are mostly fur-bearing animals, and their pelts are likely to become increasingly valuable in the markets of the world. Every year millions of opossum skins and hundreds of thousands of macropus skins are exported to the Old World at good prices. The farmer and the farmer's wife, the farmer's sons and the farmer's daughters make pin money by skinning the opossums. These animals are necessarily becoming greatly reduced in numbers, and in many districts are practically exterminated. The kangaroos and wallabies are shot for sport, for their pelts, for their soup-making tails, or because they are rivals of the sheep and cattle. Is Australia prepared to lose altogether its fur-bearing marsupials? The speaker said he had inquired at times among practical men, and found that at present prices it is much more profitable on fairly good land to rear sheep and cattle than to rear kangaroos and wallabies. In poor country, rocky and hilly, the comparison is not so unfavourable to the latter. The feasible policy, then, seems to be to protect the marsupials to such an extent as to prevent extermination on the good grounds, to give them a good chance in poor country, and to set aside areas, the Government on a larger scale, as in national parks and reserves, and broad-minded landowners, as some are doing, on a smaller scale, in which a stock of marsupials may be preserved. Then, when prices are favourable, it will be at least possible to develop on a

feasible scale a fur industry which may compare with the ostrich farming which has been found so profitable in Cape Colony.

In 1903, New South Wales prescribed a close season from August 1 to January 31 of each year for the red kangaroo, the wallaroo, the native bear and some other animals. It is hoped that the list will be extended to include the other fur-bearing marsupials.

EUROPE.

LITERATURE RELATING TO ICELAND.—The Cornell University Library has issued the first number of an annual under the name of "Islandica" (Price \$1), devoted to Iceland and the Fiske Icelandic Collection in the Cornell Library. It is edited by Mr. George William Harris, Librarian. The first volume is a "Bibliography of the Icelandic Sagas and Minor Tales," by Halldór Hermannsson. The formation of this Icelandic collection was the work of a lifetime, for its beginning was made by Mr. Fiske when a student in the University of Upsala more than fifty years ago. It contains about 9,000 volumes.

POLAR.

A MAP CORRECTION.—A mistake occurs in the map of the Coast of North-east Greenland prepared by the late Mylius-Erichsen, which should not be introduced into atlases. That explorer attached the name of Peary Land to the southern part of the largest island in the archipelago north of the Greenland coast. Commander Peary himself gave the name of Heilprin Land and Melville Land to the southern regions in this island. With the approval and by the desire of geographers in America and Europe, the extreme northern part of the island of Greenland, made known to the world by Commander Peary's remarkable sledge journey of 1892 on the inland ice, was named Peary Land in 1896. The suggestion was made by the Geographical Club of Philadelphia and was seconded generally by Arctic authorities.

POSITION OF THE SOUTH MAGNETIC POLE.—At the last meeting of the British Association, Mr. L. C. Bernacchi presented a paper on the results of physical observations taken on the National Antarctic expedition by the *Discovery* in 1902-4. The magnetographs clearly showed that the regular diurnal variation of declination is from five to six times as large as that at Kew. Even during the months when the sun is continuously below the horizon, the diurnal range remains at least double that at Greenwich at midsummer. In order to determine the position of the South Magnetic Pole by means of all the declination observations taken at the winter quarters, at sea and on sledge journeys, the results were plotted and the direction of the magnetic meridians as indicated by the observations extended towards the magnetic pole. The probable position of the pole as worked out by this method is latitude $72^{\circ} 50' S.$, longitude $156^{\circ} 20' E.$ All the inclination results were plotted on a chart and lines of equal inclination drawn, from which the probable position of the pole was indicated to be in latitude $72^{\circ} 52' S.$, longitude $156^{\circ} 30' E.$ The agreement between this position and that determined by the declination results is remarkable and may be considered as corroboration of the results. (*Electrical Engineering*, Vol. 4, p. 432.)

OCEANIA.

FIRST CROSSING OF BOUGAINVILLE—Prof. Dr. Sapper and the Governor of German New Guinea were the first white men to cross, in July last, the German island of Bougainville, in the Solomon Archipelago. Few whites who have been on the coasts of this archipelago have undertaken to push into the interior, on account of the unfriendly attitude of the natives. Dr. Sapper and his companion had no trouble with them. They crossed the Crown Prince Mountains at an elevation of 1,500 meters and their journey from coast to coast, 51 kilometers, occupied five days. Along their route mammalia were very poorly represented, and the island is not nearly so rich as Kaiser Wilhelmsland and New Pomerania in varieties of birds. The coastal plain on the east side of the island abounds in fine marketable timber. On the east side the population lives to a height of 600 meters, and one village was found on the west side at an elevation of 900 feet above the sea. The western part of the island is sparsely populated, and all the inhabitants are physically inferior and their condition is not nearly so comfortable as that of many of the Pacific peoples, owing to the incessant warfare among themselves and the fact that they have only small trade relations with the whites. There are only dialectic differences in the speech of the east and west coasts. (*Deutsche Rund. für. Geog. u. Stat.*, Vol. 31, No. 3, p. 140.)

OCEANOGRAPHY.

SALINITY OF THE NORTH SEA.—*Nature* (No. 2042) prints a chart of the mean salinity of the surface of the North Sea, which has been constructed from the international observations made during the years 1903-7. The general features of the chart are very simple. The highest salinities are found, first, around the Shetland Islands, and, secondly, in the neighbourhood of the Strait of Dover. The values are somewhat higher in the former region than in the latter, where the connection with the waters of the ocean is more remote. The salinity falls off rapidly in the Skagerrak, and is, on the whole, low everywhere in the vicinity of the coast. The salinity is shown by isohalines (or curves of equal salinity, the figures on the curves showing the number of grams of chlorides in 1,000 parts of water). At the mouth of the Cattegat, where the mean salinity is about 25, the annual variation is nearly 10 per cent.; at the mouth of the Skagerrak, where the mean salinity is about 31, the mean variation is about 5 per cent.; in the middle of the North Sea, with a mean salinity of 34.75, the mean variation is only about 0.2 per cent.; and in the region of the highest salinities off Shetland, of about 34.25 per cent., the mean variation is still less.

CLIMATOLOGY AND METEOROLOGY.

STUDIES OF FROST AT WILLIAMSTOWN, MASS.—The phenomena of frost are so directly controlled by local conditions of topography and of radiation, that in a certain sense each locality should be studied by itself in relation to the special conditions which there bring frost. For this reason, local investigations of frost occurrence are chiefly of interest over a restricted area, and yet all such investigations, if carefully made, throw light on a meteorological phenomena of great interest, and of high economic importance. Professor Willis I. Milham, of Wil-

liams College, Williamstown, Mass., has lately published the results of "A Two Years' Study of Spring Frosts at Williamstown, Mass." (*Monthly Weather Review*, August, 1908), in which the conclusions are as follows:

The so-called spring frosts may be expected from the last of April until the first of June, and occur on still clear nights, with the wind almost invariably from the north west. They are likely to come on the first or second night following the passage of a low, and the transition of the control to an area of high, pressure. This facilitates both the importation of colder air and radiation, the two processes which cause the low temperatures required. The air is so dry, and the dew-point so low, that it plays no part whatever in determining the amount of the drop from the maximum to the following minimum. The drop is, however, far from a constant, and must be estimated for each individual case, taking into account the probable characteristics of the afternoon and night.

If, after the probable temperature in the thermometer shelter has been estimated, it is desired to determine what the probable temperatures of low-growing vegetation in the coldest part of the limited area will be, three things must be taken into account: First, that plant temperatures go below the real air temperatures, because the plants are in the open without such a hindrance to radiation as is the shelter about a thermometer; second, that vegetation is located near the ground and not at the height of the instruments in the shelter; third, that the variation in temperature over a limited area may amount to several degrees. Were this computation carried out with the average values for Williamstown, about 2° would be allowed for exposure in the open, 3° for height, and 6° for variation between the shelter and the coldest part of the area. Thus the temperatures of vegetation in the open, near the ground, in the coldest part of the village, may be expected to average 11° lower than the estimated minimum in the shelter, as it is now located.

R. DEC. W.

TYPES OF WEATHER IN MADRAS.—The increasing attention which is being paid to weather types is doing much to enliven, and to render more effective, the study of climates. For, as climate is the average of weather, no clear conception of a climate is possible without some understanding of the various types of weather which are concerned in making up the climatic means and extremes. A recent study along these lines is entitled "A Discussion of Types of Weather in Madras," by R. LI. Jones, and appears as Vol. XX, Prt. 4, of the *Memoirs of the Indian Meteorological Department* (fol. Simla, 1908, pp. 71, plt. 35). The report contains a series of charts showing the 8 A. M. pressure distributions which accompany and are peculiar to different kinds of weather in the south of the Madras Presidency. The most important types corresponding to the four seasons are: (1) the cold weather type; (2) the hot weather type; (3) the southwest monsoon type; (4) the northeast monsoon type. The periods of the year during which these different types normally prevail are as follows: (1) the end of December to the end of February; (2) the beginning of March to the end of May; (3) the beginning of June to the first week in October; (4) the second week of October to the third week in December. The charts, with explanatory text, will prove very useful to all students of Indian climatology. R. DEC. W.

IS THE CLIMATE OF THE BRITISH ISLES CHANGING?—An important paper was read before Section A of the British Association at its Dublin meeting, under the title, "Is our Climate Changing?", by Sir John W. Moore, and has since been printed in full in the *Dublin Journal of Medical Science* for October, 1908. The author gives a discussion of possible climatic changes in the British Isles, together with a bibliography of the subject. The observations made by the author in Dublin since 1866 are also discussed in a series of tables, with explanatory text. The conclusion reached is as follows:

In conclusion, I venture to submit that the facts which I have put forward in this paper prove that within the past six centuries, at all events, no appreciable change has taken place in the climate of the British Isles. There is not a scintilla of evidence to show that, within historic times, any such change has taken place in the past, or is likely to take place in the future.

R. DEC. W.

THE CLIMATE OF PALESTINE.—In connection with the interest which is now being taken in the climatic conditions of the historical past, what Professor G. Hellmann, of Berlin, recently said before the Royal Meteorological Society of London may be worth noting (*Quart. Journ. Roy. Met. Soc.*, October, 1908). In the course of his investigations into meteorological folk-lore and early literature, Professor Hellmann finds that the first quantitative observations of rainfall were made in the first century A. D. in Palestine. The influence of rainfall on the crops was, without doubt, recognized in Palestine at an early date, and the results of the observations to which Professor Hellmann refers are preserved in the Mishnah, a collection of Jewish religious books apart from the Bible. The amount of rainfall then considered normal for a good crop Professor Hellmann finds to correspond closely with that deduced from modern observations made by Mr. Thomas Chaplin, at Jerusalem. From this fact, according to Hellmann, "it can be inferred that the climate of Palestine has not changed." R. DEC. W.

VARIOUS.

The Twenty-ninth Annual *Report* of the Director of the U. S. Geological Survey shows that the area of the country topographically mapped in the fiscal year 1907-8 was 25,658 square miles, making the total area surveyed to date in the United States 1,051,126 square miles, or about 35 per cent. of our territory. The area covered by topographical surveys in Alaska during the year was about 6,626 square miles.

Mr. Waldemar Lindgren of the United States Geological Survey has been appointed lecturer in Economic Geology at the Massachusetts Institute of Technology to succeed Prof. James F. Kämp of Columbia University.

Dr. J. Paul Goode of the University of Chicago gave an address before the Geographical Society of Chicago on Dec. 11 on the subject "The Great Seaports of Europe."

Prof. George E. Hale, Director of the Solar Observatory of the Carnegie Institution, has been elected a Foreign Correspondent of the Paris Academy of Sciences in place of the late Asaph Hall.

Dr. Edwards of the Carnegie Institution is in Shanghai, where he is preparing to carry out a magnetic survey of China.

The yacht "Carnegie" is being built at Tebo's Yacht Basin, Brooklyn, for the Magnetic Survey Service of the Carnegie Institution. The ship will be as nearly as possible non-magnetic. Only a few hundred pounds of iron and steel are being used in its construction. Bronze and other metals which do not deflect the needle have been substituted. The vessel will be 155 ft. long, with a displacement of 568 tons with all stores and equipment on board. She is to be completed on or before July 1st next. The observation rooms will be on deck.

The Mont Blanc Observatory, erected for Director Janssen in 1893 at the summit of Mont Blanc, was practically destroyed in August last by the weight

of snow upon it. The instruments were saved and Mr. J. Vallot has undertaken to secure means for the erection of a new observatory.

Mr. E. G. Ravenstein, the well-known British geographer and cartographer, has printed for private circulation a booklet recording the varied literary work that has marked his long career.

The "*Bulletin*" of the Philippines Weather Bureau (Jan., 1908) gives a list of seventeen earthquakes which occurred in the archipelago in January last year, noting the intensity of the shocks, according to the Rossi-Forel Scale.

THE AMERICAN GEOGRAPHICAL SOCIETY.—A regular meeting of the Society was held at the Engineering Societies' Building, No. 29 West Thirty-ninth Street, on Tuesday, December 22, 1908, at 8.30 o'clock P. M.

Vice-President Greenough in the Chair.

The following persons recommended by the Council were elected to Fellowship:

Murray Boocock,	Samuel Hill,
Amasa Walker,	Edward Aberle,
James A. Burden,	Thomas A. Keck.

The Chairman then introduced Dr. William Elliot Griffis, who addressed the Society on "The Geography of Japan."

Stereopticon views were shown.

On motion, the Society adjourned.

OBITUARY.

ARTHUR JEPHSON.—Captain Arthur Jephson, the last survivor of the Stanley Expedition for the relief of Emin Pasha, died on Oct. 22d last, on his estate near Ascot, England, aged 58 years. He was the first of Stanley's party to reach Emin Pasha, and spent some time with him on the Upper Nile before Stanley and the rest of his expedition reappeared at Albert Nyanza. Jephson wrote an interesting volume relating to the Upper Nile as he found it under the government which Emin Pasha established in that vast region over which Mahdism had not been able to establish its ascendancy. Five years ago Captain Jephson married a lady from California.

HELI CHATELAIN.—The friends in America of Héli Chatelain will regret to learn of his death in Lausanne, Switzerland, on July 22d last. In delicate health from childhood, he lived nearly a half century and accomplished useful work as a philologist, ethnographer and missionary. Coming to the United States in 1883, he studied theology and medicine, and in 1885 went to Angola, Portuguese West Africa, as one of the missionaries sent out by Bishop Taylor. While in Angola he actively prosecuted his scientific studies. His translations of some of the gospels into the Kimbundu language were published in Europe. Later he accompanied the Eclipse Expedition sent by our Government to Angola and made ethnological collections for the National Museum. He also published a Kimbundu grammar, and edited the African names in the Century Dictionary. His book "Folk-Tales of Angola" was published by the Folk Lore Society.

Among his contributions to the *Bulletin* of this Society were "Geographic Names of Angola, West Africa," and "Bantu Notes and Vocabularies," both in the volume for 1893. In 1897 he founded the "Phil-African Mission," with a station near the edge of the Angola Highlands, devoted to the industrial training of the natives under Christian influences. Late in 1907 he was compelled by ill health to return to Lausanne, where he died.

EMIL STEPHAN.—The expedition which the Prussian Ministry of Education organized a year ago for ethnographical work in the Bismarck Archipalego and other parts of the South Seas has been so unfortunate as to lose its leader, Dr. Emil Stephan, who died in New Mecklenburg on May 25. Dr. Krämer, already well known for his work in the Western Pacific, has taken charge of the expedition.

NEW MAPS.

AMERICA.

U. S. GEOLOGICAL SURVEY MAPS.

Two maps in the 29th Annual *Report* of the Director of the Survey, Washington, D. C., 1908:

(1) Map of the U. S. showing areas covered by the topographic surveys. Scale, 225 miles to an inch.

Coloured symbols show areas surveyed on the three principal scales of the Survey in 1907-8 and in earlier years.

(2) Map of the U. S. showing areas covered by the geologic surveys. Scale, 225 miles to an inch.

Shows areas covered by published and unpublished folios of the Geologic Atlas and areas of detailed and reconnaissance surveys.

ARIZONA.—Topographic and Geographic Sketch map of a portion of Western Arizona. Scale, 16 statute miles to an inch. *Bull.* 352 "Geologic Reconnaissance of a Part of Western Arizona." 1908.

Little has been done heretofore towards the accurate mapping of western Arizona south of the 35th parallel. This map, with the advantage of data acquired by recent railroad surveys, is reasonably accurate.

OREGON.—Reconnaissance Geologic map of South-Central Oregon. Scale, 6 miles to an inch. $42^{\circ}-43^{\circ} 30' N.$; $119^{\circ} 45'-121^{\circ} 15' W.$ Water-Supply Paper 216. In "Geology and Water Resources of a portion of South-Central Oregon." By Gerald A. Waring.

Geological colouring. Contour interval approximately 100 ft.

OREGON.—Reconnaissance Topographic map of South-Central Oregon. Scale, 6 miles to an inch. Water-Supply Paper 220. By G. A. Waring.

CALIFORNIA.—Water Supply Paper 219. "Ground Waters and Irrigation Enterprises in the Foothill Belt, Southern California." By Walter C. Mendenhall.

The maps (plates III.—IX in pocket) show the lands irrigated in the Foothill